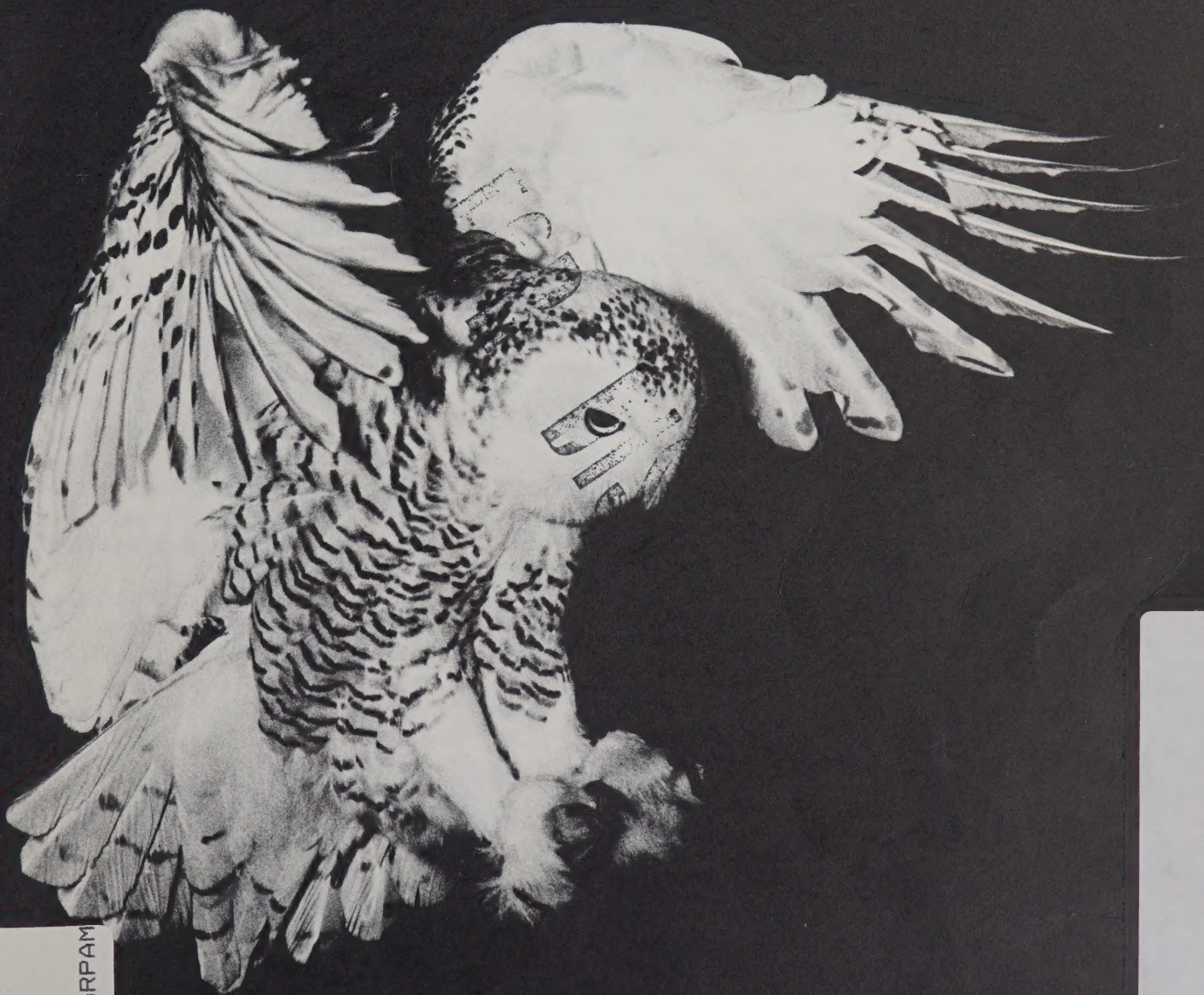


# Snowy Owl



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The robust Snowy Owl (*Nyctea scandiaca*) of the North is a winter visitor to southern Canada only every five years or so. It is on these periodic visits that southern Canadians have a chance to see one of the most striking and distinctive of the 123 types of owls found in the world.

#### *Distribution*

Snowy Owls breed on the arctic tundras of the world. The arctic islands, from Ellesmere in the north, Baffin in the east, and Banks in the west, and the northern coast from the Yukon to Labrador compose the Canadian breeding range. All areas of the range are not used in all years.

Many Snowy Owls winter where they nest, but those breeding in the northernmost regions, where 24 hours of darkness is common in winter, move in that season to the southern limit of their breeding range. Snowy Owls are not regular migrants to southern Canada and northern U.S.A., the areas shown as wintering range on the map. Rather, their southward excursions are periodic, about every four or five years, matching the population lows of the small arctic lemming. At such times Snowy Owls may be seen in the southern latitudes of every province.

#### *Appearance and habits*

Large and bulky, the Snowy Owl measures 22-27 inches (55.9-69 cm) and has a wing span of about five feet (1.5 m). The female is larger and heavier than the male, as is the case with large hawks and owls. It is known that with some birds of prey the adult males kill their young and the larger size of the parent female enables her to defend the nest successfully against him. This does not occur with Snowy Owls and the reason for their size difference is unknown. It is suspected that on the breeding grounds, each sex has a different prey preference thus assuring a more stable food supply for nestlings.

The male is almost pure white; the female, her white feathers generally tipped and barred with

dark brown, is darker. The Snowy Owl is well protected from the icy blasts of winter. A dense layer of down next to the skin is overlaid with thick lightweight feathering. This luxurious coat insulates the entire body, including the legs and toes, and enables the bird to maintain a body heat of 100° to 104° F (38° to 40° C) in temperatures that may reach -40° to -60° F (-40° to -50° C). To overcome the wind chill factor, the Snowy Owl faces the wind so that its feathers are pressed against the body. In severe wind, it crouches on the ground behind a wind break such as a stone pile. Its light plumage serves the bird well when in this position as it blends with the snow and rodents scurrying by are unable to see the bird until it is too late. As spring approaches and the ground becomes bare, the Snowy Owl moves to patches of snow where it is well camouflaged.

The smooth, round head lacks the ear-like feather tufts characteristic of many owls. The bill tip is black. The yellow eyes are surrounded by feathers that grow from disk-shaped face bones. These disks serve as parabolic reflectors throwing sound waves to the ears located immediately below. Its acute hearing enables the Snowy Owl to hunt by sound in total darkness, when it cannot see.

The eyes of owls are directed forward and do not move in their sockets. To look to the side or to follow a moving object, the bird swivels its head as much as 270°, giving the impression that it will twist its head off. These highly developed eyes contain many light-gathering cells, many more than the human eye, and can spot tiny objects moving at a great distance.

Unlike its nocturnal relatives, the Snowy Owl is active by day. As daylight is almost continuous within the Arctic Circle during the summer nesting season, this adaptation to hunting in daylight is not surprising.

In those years when the Snowy Owl winters in southern Canada, it lives in open fields and on shorelines that are similar to the treeless tundra. It may be found perched on a fencepost, haystack, tree, building or telephone pole, but always where the view is unrestricted. The Snowy Owl, like most hawks and owls, is a loner when it is not breeding. Each bird stakes out a hunting territory, large or small depending on how much prey is available. The bird scans the area from a commanding perch for long monotonous periods, broken only to chase another owl or hawk from the territory or to drop silently on a mouse or other delectable morsel.

The bird is shy and silent, unless nesting. It normally will not permit humans to approach and will hiss and scream at those intruding on its territory, but it will dive only in defence of its nest.

#### *Feeding*

Although fast enough to kill ducks and geese on the wing, the Snowy Owl prefers small mammals.

■ Breeding range  
||||| Wintering range





It eats arctic hares and ptarmigans, but its staple food is the lemming. The Snowy Owl's four- to five-year invasions of the south are keyed to the population lows to which the lemming is subject. This small arctic rodent resembles a field mouse so prolific that its populations become enormous and outstrip their food supply. At such times starvation, disease and seemingly suicidal migrations when many die by drowning cause their large number to dwindle so rapidly that the species seems on the point of vanishing. From this low point, the population gradually recovers until, four or five years later, it again reaches a peak which brings on another decline. It is during these slumps in the lemming population that Snowy Owls move south in search of food.

Snowy Owls, as well as hawks and other types of owls, usually swallow their prey whole. Strong stomach juices dissolve the flesh. The indigestible bones, fur and teeth are compacted into neat pellets, which the bird throws up by stretching its neck and opening its bill wide. Regurgitation most often takes place at the owl's favourite perch, where hundreds of pellets are sometimes found. Naturalists search for these pellets so they may study them to determine the quantity and type of food eaten. In southern Canada the pellets most commonly contain the bones of meadow voles or meadow mice. Each bird eats 6 to 10 mice per day or up to 300 mice per month; and "that", in the words of Jinx the Cat, "is a lot of meeces". If meadow mice are scarce, other kinds of prey are taken. The presence of lead shot in the pellets in fall and winter indicates that Snowy Owls eat ducks wounded by hunters.

### *Breeding*

Snowy Owls that winter in southern Canada and northern United States begin moving northwards to their arctic breeding grounds in February and March. Most are well on their way by April.

Their nesting habits depend on how many lemmings are available. When food is scarce, the owls may not nest at all, or may lay only four eggs. When it is plentiful, they make up for lost production by laying up to 10 eggs, but 11 to 14 are known. A single egg is usually laid on alternate days, depending on the amount of food available to the female. The nest, simply a depression scraped in the ground by the female, is furnished only with a few of her own feathers and a few pieces of grass or moss. It is located on a knoll or other vantage point giving a good view of the surrounding countryside. While the female takes sole responsibility for incubation, she is not entirely on her own. Her mate provides her food, particularly in the early part of the nesting season, in May, when temperatures are below freezing and she must stay on the eggs to keep them warm.

The female begins incubation when she lays the first eggs. Hatching takes from 32 to 33 days

and laying continues into the brooding period. As a result, large clutches contain down-covered chicks of many different ages and colours since the down changes from white, just after hatching, to dark grey and to nearly black at 10 days old. Overcrowding problems in the nest are avoided by chicks leaving it when only two to three weeks old, an age long before they fly. They disperse widely from the nest and each one is faithfully fed by the male, who also supplies the nest with adequate food. Fledging occurs at eight weeks, at which time the dark down is replaced by flight feathers.

### *Limits to population*

Food shortage is the greatest threat to Snowy Owl populations, but these resourceful creatures overcome this by migrating far afield. Man poses a great danger. Trophy hunters have shot many Snowy Owls during the winters they must spend in the settled areas. Fortunately, an ever-increasing number of people are learning to enjoy the sight of this fine bird, shooting it with cameras instead of guns.

During the nesting season in the Arctic, the eggs and unattended young are subject to the unwelcome attention of jaegers, swift-flying gull-like birds that prey on the nests of many arctic bird species.

### *Management*

Although the Snowy Owl is not protected by the Migratory Birds Convention Act, provincial regulations prohibit the shooting of these birds in most parts of Canada. Banding for scientific purposes requires special federal and provincial permits. The Canadian Wildlife Service is not engaged in intensive research on this species but does support arctic ecology projects that include the study of owls.

This species has adapted to the very cold arctic winters and has become deeply intertwined with other living creatures in maintaining nature's balance.

During its southern visits, the Snowy Owl plays a valuable role in the natural control of rodents on farmland. It shares its breeding grounds with colonies of Snow Geese and offers that game species some protection from foxes and jaegers.

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